# Survival and success rates of pressed single lithium disilicate, zirconia veneered and metal-ceramic crowns in the pre-molar and molar area: a pilot study

Published: 03-04-2012
Last updated: 01-05-2024

The objective of this study is to compare the clinical performance of three different kind of restorations namely 2 types of all ceramic restorations (pressed lithium disilicate and veneererd zirconia) and metal-ceramic restorations.

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| **Ethical review** | Approved WMO |
| **Status** | Will not start |
| **Health condition type** | Dental and gingival conditions |
| **Study type** | Interventional |

## Summary

### ID

NL-OMON37769

**Source**
ToetsingOnline

**Brief title**
Survival and success rates of crowns in the pre-molar and molar area

### Condition

- Dental and gingival conditions

**Synonym**
crown

**Research involving**
Human

## Sponsors and support

**Primary sponsor:** Universitair Medisch Centrum Groningen
**Source(s) of monetary or material Support:** Ministerie van OC&W

## Intervention

**Keyword:** crown, Lithium disilicate, Metal-porcelain, Zirconia

## Outcome measures

### Primary outcome

Main study parameters/endpoints:

1) survival rate of the restoration after 1, 3 and 5 years

2) success rate of the restoration after 1, 3 and 5 years

### Secondary outcome

Secundary outcome parameters

1) soft tissue recession

2) pulp vitality / peri-apical radiolucency

3) plaque index

4) probing pocket depth

To be determined 2 weeks, 1, 3 and 5-years post-cementation,

# Study description

### Background summary

Metal-ceramic restorations (NL: goud-porselein kronen) have been considered the *gold standard* for indirect tooth restorations. However, all ceramic restorations are used for a growing number of indications in dentistry today.

There are several all-ceramic systems available for the clinician to choose from. However little is known about the clinical efficacy of these new types of crowns.

### Study objective

The objective of this study is to compare the clinical performance of three different kind of restorations namely 2 types of all ceramic restorations (pressed lithium disilicate and veneererd zirconia) and metal-ceramic restorations.

### Study design

A randomized clinical trial

### Intervention

A crown is made in the posterior part of the mandible or maxilla.

### Study burden and risks

None anticipated. No extra visits. Regular visits may be marginally longer because the research data are collected.

## Contacts

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

**Age**
Adults (18-64 years)
Elderly (65 years and older)

### Inclusion criteria

- patient is in need of an indirect restoration in the pre-molar or molar region
- patient is over 20 years old;
- adequate oral hygiene can be maintained;
- patient is able to understand and sign an informed consent;
- there is ample ferrule

### Exclusion criteria

- medical and general contraindications for the procedures;
- decreased masticatory function due to physical disorders;
- severe bruxism;
- patients with active periodontitis or periapical lesions of the tooth to be treated.

## Study design

### Design

**Study type:** Interventional

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|---|---|
| Masking: | Open (masking not used) |
| Control: | Uncontrolled |
| Primary purpose: | Treatment |

### Recruitment

NL

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|---|---|
| Recruitment status: | Will not start |

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|---|---|
| Enrollment: | 75 |
| Type: | Anticipated |

## Ethics review

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|---|---|
| Approved WMO Date: | 03-04-2012 |
| Application type: | First submission |
| Review commission: | METC Universitair Medisch Centrum Groningen (Groningen) |

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

No registrations found.

### In other registers

| Register | ID |
|---|---|
| CCMO | NL38161.042.11 |